

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of manufacturing a semiconductor device comprising:

(a) forming a groove on a first surface of a semiconductor substrate, a plurality of integrated circuits and electrodes being formed on the first surface;

(b) forming an insulating layer on an inner surface of the groove;

(c) forming a first conductive layer on the insulating layer on the inner surface of the groove;

(d) grinding a second surface of the semiconductor substrate opposite to the first surface until the groove is exposed to divide the semiconductor substrate into a plurality of semiconductor chips each of which has a first conductive layer exposed on a side surface of each of the semiconductor chips, a sheet being provided over the first surface and a filler material being provided between the first surface and the sheet, and the filler material being formed integrally over the first surface and in the groove;

(e) stacking the semiconductor chips; and

(f) electrically connecting the first conductive layer of one of the semiconductor chips with the first conductive layer of another one of the semiconductor chips.

2. (Original) The method of manufacturing a semiconductor device as defined in claim 1, wherein the insulating layer is continuously formed from the inner surface of the groove to the first surface in the step (b).

3. (Original) The method of manufacturing a semiconductor device as defined in claim 1, wherein the first conductive layer is continuously formed from the inner surface of the groove to the first surface in the step (c).

4. (Original) The method of manufacturing a semiconductor device as defined in claim 1, wherein the first conductive layer is electrically connected to one of the electrodes in the step (c).

5. (Original) The method of manufacturing a semiconductor device as defined in claim 1, wherein the semiconductor chips are stacked so that the first surfaces of the semiconductor chips on which the electrodes are formed are oriented to the same direction in the step (e).

6. (Original) The method of manufacturing a semiconductor device as defined in claim 1, wherein the semiconductor chips are stacked so that the first surface of one of the semiconductor chips on which the electrodes are formed is oriented opposite to the first surface of another one of the semiconductor chips on which the electrodes are formed in the step (e).

7. (Currently Amended) A The method of manufacturing a semiconductor device ~~as defined in claim 1~~ comprising:

(a) forming a groove on a first surface of a semiconductor substrate, a plurality of integrated circuits and electrodes being formed on the first surface;

(b) forming an insulating layer on an inner surface of the groove;

(c) forming a first conductive layer on the insulating layer on the inner surface of the groove;

(d) grinding a second surface of the semiconductor substrate opposite to the first surface until the groove is exposed to divide the semiconductor substrate into a plurality of semiconductor chips each of which has a first conductive layer exposed on a side surface of each of the semiconductor chips;

(e) stacking the semiconductor chips; and

(f) electrically connecting the first conductive layer of one of the semiconductor chips with the first conductive layer of another one of the semiconductor chips,

wherein the step (e) includes providing at least one insulating substrate insulator between the semiconductor chips.

8. (Currently Amended) The method of manufacturing a semiconductor device as defined in claim 7, wherein the insulating substrate insulator projects from side surfaces of the semiconductor chips in the step (e).

9. (Original) The method of manufacturing a semiconductor device as defined in claim 1, wherein the step (f) includes forming a second conductive layer which electrically connects the first conductive layers on a side surface of at least one of the semiconductor chips.

10. (Original) The method of manufacturing a semiconductor device as defined in claim 9, wherein the second conductive layer is extended in a direction perpendicular to the semiconductor chip in order to electrically connect the first conductive layers of the semiconductor chips which are stacked straight in the step (f).

11. (Original) The method of manufacturing a semiconductor device as defined in claim 9, wherein the second conductive layer has a portion extending in a direction parallel to the semiconductor chips in order to electrically connect the first conductive layers of the semiconductor chips which are irregularly stacked in the step (f).

12. (Currently Amended) The method of manufacturing a semiconductor device as defined in claim 8,

wherein the step (f) includes forming a second conductive layer which electrically connects the first conductive layers on a side surface of at least one of the semiconductor chips;

wherein the second conductive layer has a portion extending in a direction parallel to the semiconductor chips in order to electrically connect the first conductive layers of the semiconductor chips which are irregularly stacked in the step (f); and

wherein a part of the second conductive layer is formed on the projecting portion of the insulating substrate ~~insulator~~.

13. (Original) The method of manufacturing a semiconductor device as defined in claim 9, wherein the second conductive layer is formed of a solder in the step (f).

14. (Original) The method of manufacturing a semiconductor device as defined in claim 9, wherein the second conductive layer is formed by supplying a solvent containing conductive particles in the step (f).

15. (Original) The method of manufacturing a semiconductor device as defined in claim 1, further comprising, at least after the step (d):

(g) mounting the semiconductor chips on a substrate; and

(h) electrically connecting the semiconductor chips to an interconnecting pattern of the substrate.

16. (Original) The method of manufacturing a semiconductor device as defined in claim 15, wherein the steps (e) and (g) are performed before the steps (f) and (h).

17. (Original) The method of manufacturing a semiconductor device as defined in claim 15, wherein a solder is used to electrically connect the first conductive layers to the interconnecting pattern in the step (h).

18. (Original) The method of manufacturing a semiconductor device as defined in claim 15, wherein the first conductive layers are electrically connected to the interconnecting pattern by supplying a solvent containing conductive particles in the step (h).

19. (Original) A semiconductor device manufactured by the method as defined in claim 1.

20-36. (Cancelled).